

F SERIES: POWER FACTOR CORRECTED

Single Output, 1000-1500 Watts



KEY FEATURES

- .98 Power Factor (UNIFACTOR®)
- Active Power Factor Correction
- Meets IEC555-2 (EN61000-3-2)
- No Load Operation
- Power Density to 4.6 W/Cubic Inch
- LED Output Power Indicator
- Compact 5x5 Inch Format
- Three Power Levels
- Redundant N + 1 Capability
- Full Output to 50°C
- 500,000 Hours Field MTBF
- Manufactured in U.S.A.

TWO - YEAR WARRANTY

STANDARD MODELS

(Other Modules Available, Consult Factory)

MAX. WATTS	MODEL NUMBER	OUTPUT
1000	FN 1000	2V 200A
	FN 9000	3.3V 200A
	FN 2000	5V 200A
	FN 3000	12V 84A
	FN 4000	15V 67A
	FN 5000	24V 42A
	FN 6000	28V 36A
	FN 7000	48V 21A
1250	FP 1000	2V 250A
	FP 9000	3.3V 250A
	FP 2000	5V 250A
	FP 3000	12V 105A
	FP 4000	15V 84A
	FP 5000	24V 52A
	FP 6000	28V 45A
	FP 7000	48V 26A
1500 ³	FQ 1000	2V 300A
	FQ 9000	3.3V 300A
	FQ 2000	5V 300A
	FQ 3000	12V 125A
	FQ 4000	15V 100A
	FQ 5000	24V 63A
	FQ 6000	28V 54A
	FQ 7000	48V 31A

OPTIONS	
D	DC "OK" Signal with Inverse
F	Current Share and Current Monitor
R	Reverse Air Flow ² (Consult Factory)

NOTES:

1. Add suffix letters to model numbers for additional options.
2. Requires derating from 40°C to 65° of 1.7%/°C.
3. 1500W models have 180-264VAC input only.



UL 1950



CSA 22.2, No. 220
or No. 234

MATING PLUGS AND PINS

J1 mating plug: Molex 39-01-2125
Pins are 39-00-0039

SAFETY CERTIFICATIONS

UL1950
CSA22.2, No. 950
EN60-950

SPECIFICATIONS

Typical at Nominal Line, Full Load and 25°C Unless Otherwise Noted.

OUTPUT SPECIFICATIONS

Output Voltage Adjustment Range, All Outputs	±10%
Line Regulation ¹ , Max.	0.2% or 10mV
Load Regulation ² , Max.	0.2% or 10mV
Ripple & Noise ³ , Max.	1% or 50mV
Holdup Time, Min.	20 msec.
Dynamic Response ⁴ , Max.	500 usec.
Temperature Coefficient, Max.	±0.02%/°C
Overvoltage Protection	Power Shutdown
Remote Sense ⁵	Standard

INPUT SPECIFICATIONS

Voltage Range, (Aurorance) ⁷	90 to 132 VAC
	180 to 264 VAC
Power Factor	0.98
Input Frequency	47 to 63 Hz
Inrush Current	80A Peak
Input Protection	Internal Fuse

GENERAL SPECIFICATIONS

Efficiency, 12V to 48V Out	70% - 85%
2V to 5V Out	55% - 70%
Switching Frequency	80 kHz
MTBF ⁶	Greater than 500,000 Hours
Input to Output Isolation	3000VAC

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	0°C to 65°C
Derating, 50°C to 65°C	3.3%/°C
Storage Temperature Range	-40°C to +85°C
Cooling	Internal DC Ball Bearing Fan
Vibration	Per MIL-STD 810D, Method 514-3, Cat-I, Proc. I
Shock	Per MIL-STD 810D, Method 516-3, Proc. II, IV, VI

PHYSICAL SPECIFICATIONS

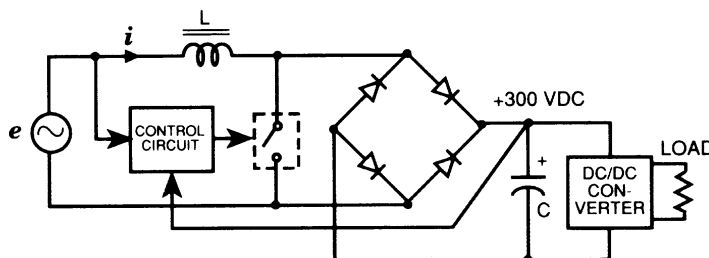
Case Material	Aluminum
Dimensions, Inches(mm)	
1000 Watts	5.00 H x 5.00 W x 12.50 D (127 x 127 x 317.5)
1250-1500 Watts	5.00 H x 5.00 W x 13.00 D (127 x 127 x 330.2)

Weight

1000W	14.0 lbs. (6.4 kg.)
1250W & 1500W	14.5 lbs. (6.6 kg.)

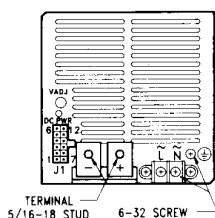
NOTES:

1. Whichever figure is greater; Measured over AC input range.
2. Whichever figure is greater. Remote sense must be connected
3. Whichever figure is greater. 20 MHz bandwidth.
4. 4% max. deviation with recovery to within 1% for 25% step change at 75% rated load.
5. 0.25V maximum load cable voltage drop.
6. Field MTBF
7. 1500W models have 180-264VAC input only.

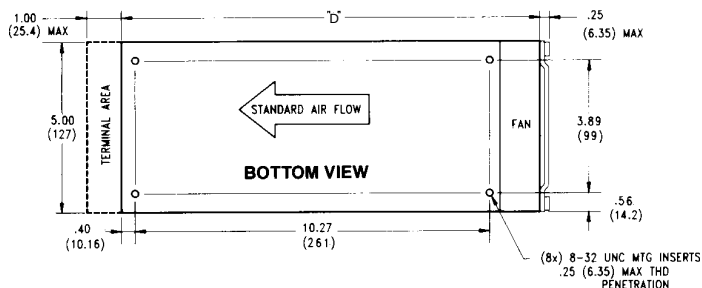
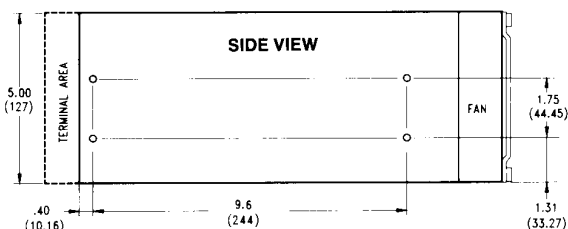


SIMPLIFIED CIRCUIT FOR ACTIVE, LOW-FREQUENCY POWER FACTOR CORRECTION.

FRONT VIEW



CASE OUTLINE



ACTIVE LOW-FREQUENCY POWER FACTOR CORRECTION

Active low-frequency (LF) power factor correction operates at a switching frequency of twice the line frequency, 100 or 120Hz., and in synchronism with it. This method uses an active switch, LF inductor and control circuit to provide power factor correction.

One way to implement active LF correction is shown above. This circuit, in simplified form, is the patented UNIFACTOR® technique used by UNIPOWER. It was chosen because of its simplicity and the fact that it provides the best overall performance with minimum impact on size, efficiency, reliability, EMI and cost.

ALL DIMENSIONS IN INCHES (mm). All specifications subject to change without notice.

07/25/01 f-ds